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| 09/554,132 | 05/09/2000 | GUNNAR WAHLSTEN | 1314 | 8276 |

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| EXAMINER |
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HA, DAC V

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| ART UNIT | PAPER NUMBER |
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2634

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DATE MAILED: 04/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/554,132

Applicant(s)

WAHLSTEN, GUNNAR

Examiner

Dac V. Ha

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. This is in response to the amendment filed on 01/22/04.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1, 2, 5, 6** are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson in view of Matsuyama et al.

Regarding claims 1 (and 5), Nelson teaches the claimed subject matter in claim 1 as followed.

"A method for the wireless transmission of data between one computer" "with the aid of a digital transmission system for the wireless transmission of digital data, where a transmitting computer is connected to a digital transmitter and where a receiving computer is connected to a respective digital receiver," (Figure 1, elements 12, 10, 16; Col. 2, lines 10-27);

"storing information to be transmitted from the transmitting computer to the receiving computer in a first memory disposed between the transmitting computer and the digital transmitter substantially continuously outputting information from said first memory to said digital transmitter" (Figure 2, elements 34, 36; Col. 2, lines 51-55);

Art Unit: 2634

"transmitting digital information from the digital transmitter to a digital receiver operatively coupled with the receiving computer;" (Figure 1; Figure 2, element 10; Col. 2, lines 28-29; Col. 3, line 6);

"feeding the digitally transmitted information from the digital receiver into a second memory associated with a second adaptation circuit disposed between the digital receiver and the receiving computer and that is under the control of an infeed" "in the second adaptation circuit;" (Figure 3, elements 62, 56, 66; Col. 3, lines 47-56);

"storing the digitally transmitted information in the second memory," "and conveying intermittently from the second memory in the second adaptation circuit to the receiving computer information that has been stored in the second memory" (Figure 3, elements 58, 66; Col. 3, 62-66; Col. 4, lines 56-60).

Nelson differs from the claimed invention in that it doesn't teaches communication between a computer "and at least one other computer"; "an outfeed oscillator" and "an infeed oscillator" and "operating the two oscillators at substantially the same frequency".

However, these claimed subject matter would have been apparent to a person of ordinary skilled in the art as followed.

Nelson teaches communication between two data terminal equipments (DTE) using modem 10 via a wireless link (Figure 1). Particularly, one DTE is a computer and the other is a bar code reader (Col. 2, lines 23-24). Nelson, however, indicates that the DTE can be any type of digital equipment which transmits and receives digital data (Col.

Art Unit: 2634

2, lines 19-21). A person of ordinary skill in the art would have realized that the other DTE could be a computer as well.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize a computer in place of the bar code reader in Nelson, for example, in situation where a computer back in the storage room communicating with a computer in the front office for determination of a sale.

Moreover, Nelson teaches data is outputting from the "first memory" (Figure 2, element 34) according to a clock from element 36 and data is inputting to the "second memory" in accordance to a clock from a phase locked loop (Figure 3, element 62). A person of ordinary skill in the would have understood that in communication, a clock from a clock generation circuit or a phase locked loop would have been conventionally originated from an oscillator (see for example, Matsuyama, Figure 14, element 107; Col. 1, lines 50-52).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the conventional "oscillator" for easily providing the clock in Nelson. Further, Nelson suggests that synchronization needs to be maintained between the transmitter and receiver (Col. 4, lines 59-60). A person of ordinary skill the art would have understood that the clock at the transmitter operates in synchronization with that at the receiver, that is "operating the two oscillators at substantially the same frequency".

Regarding claims 2 (and 6), Nelson and Matsuyama teach all the claimed subject matter in claim 2, as applied to claim 1 above. Matsuyama further teaches the

Art Unit: 2634

claimed subject matter "including the step of synchronizing the frequency of the infeed oscillator in the second adaptation circuit with the frequency of the outfeed oscillator in the first adaptation circuit by locking the frequency of the infeed oscillator onto a reference included in the digitally transmitted signal from the digital transmitter" as followed.

Matsuyama teaches a method for synchronizing a regenerated clock with a received signal using a preamble in the received signal (Col. 2, lines 17-21). That is the clock signal generated from clock regenerating circuit (Figure 3) is "locked" on the received signal using the preamble included in the received signal.

Nelson suggests that synchronization needs to be maintained between the transmitter and the receiver (Col. 4, lines 59-60), however, Nelson stops short of providing a specific method for synchronization.

There are many method used for synchronization that are known in communication systems. Synchronization can be achieved by transmitting a clock separately, embedding a clock in the transmitted signal or utilizing a portion (i.e. preamble). Matsuyama teaches a method for synchronizing a regenerated clock with the received signal using a preamble included in the received signal such that only a short time is required for achieving synchronization (Col. 2, lines 21-22).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the technique of synchronization taught by Matsuyama into Nelson so that synchronization can be obtained quickly, thus, improving the speed of the system.

Art Unit: 2634

4. Claims 3, 4, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson in view of Matsuyama as applied to claims 1, 5, respectively above, and further in view of Dingsor and Nomura.

Regarding claims 3 (and 7), the combination of Nelson and Matsuyama teaches all the claimed subject matter in claim 3, as applied to claim 1 above, except for the claimed subject matter "including the steps of providing in the second adaptation circuit a microprocessor for determining from a fast information channel (FIC) in the digital system those parts of the digitally transmitted signal that contain data, and storing the digitally transmitted data in the second memory."

The attention is now directed to Dingsor and Nomura.

Dingsor teaches a modem utilizing a "microprocessor" and DSP for communication between a computer and other devices wirelessly (Figure 2; Col. 4, lines 39-54).

Nomura teaches a receiving method utilizing a DSP (Figure 3, element 25; Col. 4, lines 10-25) for receiving digital audio broadcast signal (DAB), which includes "FIC" as standard (Col. 1, lines 38-41).

Dingsor utilizes the "microprocessor" and DSP in the modem for performing a plurality of functions including analyzing the received signal (Col. 4, lines 39-54).

Therefore, a person of ordinary skill in the art at the time of the invention would have motivated to incorporate the modem taught by Dingsor into the aforementioned combination to improve at least the performance of the modem since microprocessor and DSP are the technology of today electronic.

Further, it would have been a desire to one skilled in the art to provide a system that is capable of operating on a plurality of different type of signals since communication, as a whole, is continuously changing, improving and integrating.

Therefore, a person of ordinary skill in the art at the time of the invention would have motivated to utilize in the combination of Nelson, Matsuyama and Dingsor a modem that is capable of receiving also DAB signal since DAB signal is becoming popular in broadcasting industry. And when such modem is used for communicating the DAB signal, the microprocessor and DSP would utilize the information from the FIC for processing the received signal since, as a standard, the FIC provides data relating to the main service channel (see Nomura, Col. 1, lines 37-44).

Regarding claims 4 (and 8), Dingsor further teaches the claimed subject matter "including the step of identifying in the microprocessor of the second adaptation circuit information that is relevant to a receiving computer and that includes identification of address information" in Col. 7, lines 57-62; Col. 8, lines 19-21; Col. 9, lines 11-14, 37-40.

Response to Arguments

5. Applicant's arguments filed 01/22/04 have been fully considered but they are not persuasive.

In the REMARKS, pages 6-9, applicant has argued that "the entire transmission path involves digital transmission". It is noted that Nelson teaches also transmission of digital information over the transmission path. Specifically, Nelson converts the digital information into radio frequency for wireless transmission. Further, conventionally, even

Art Unit: 2634

though digital information could be digitally modulated and transmitted at baseband, it is advantageously to convert it to radio frequency for wireless transmission (i.e. signal can travel further). Therefore, Nelson teaches transmission of digital information over the transmission path.

Moreover, the claims recite the use of an oscillator. As indicated previously, many methods for controlling the timing of the transmitting signal and maintain synchronization between the transmitter and receiver. A PLL, which contain an oscillator, could provide a far more stable controlling (clock) than an oscillator itself. Therefore, the use of oscillator is optional to one skilled in the art.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2634

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dac V. Ha whose telephone number is 703-306-5536.

The examiner can normally be reached on 5/4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dac V. Ha
Examiner
Art Unit 2634



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